

Primer for Policymakers

Understanding National Health Accounts: The Methodology and Implementation Process

Introduction

Health systems worldwide are expanding their capacity to improve the well-being of the populations they serve – but in doing so are incurring appreciable new costs. These costs make having better information about health sector financing a crucial element for the design of health care policy.

National Health Accounts (NHA) is an internationally accepted tool for summarizing, describing, and analyzing the financing of national health systems – essential to better use of health financing information to improve health system performance. To date, NHA has been conducted in more than 50 middle- and low-income countries.

This primer outlines the methodology and steps involved in conducting NHA. The document is intended for individuals who are new to NHA and who are interested in gaining a basic understanding of the health accounts concept.

The primer begins with an overview of the concept and purpose of NHA. This is followed by descriptions of country experiences with NHA. Subsequent sections discuss

health expenditure, the NHA framework and classification system, assembling the NHA team, and collecting and analyzing the data. Final sections show how NHA data can be used for policy purposes, with specific attention to the importance of institutionalizing NHA so that it may serve as an ongoing resource to policymakers.

The NHA Concept

NHA is a standard set of matrices, or tables, that presents various aspects of a nation's health expenditures. NHA encompasses total health spending in a country – including public, private, and donor expenditures. In addition to determining how much each of these financing sources spends on health, NHA carefully tracks the *flow* of funds from one health care actor to another, such as the distribution of funds from the Ministry of Health (MoH) to each government health provider and health service. In short, NHA measures the “financial pulse” of national health systems and answers questions such as:

- ▲ Who in the country pays for health care? How much do they spend and on what types of services?



▲ How are funds distributed across different health services?

▲ Who benefits from health expenditures?

The flexibility of the NHA framework also allows for analysis of data on targeted populations or disease-specific activities, such as health expenditures related to maternal and child health, or HIV/AIDS.

The presentation of NHA in a standard set of matrices organizes health expenditure information based on an international classification scheme. This format can be easily understood and interpreted by policymakers, including those without a background in economics.

Policy Purpose of NHA

NHA is a tool specifically designed to inform the health policy process, including policy design and implementation, policy dialogue, and the monitoring and evaluation of health care interventions. Its primary users are health sector policymakers and managers, who use NHA data in their efforts to improve health system performance and management.

NHA information is useful to the decision-making process because it is an assessment of the current use of resources and can be used to compare one country's health system with those of other countries – of particular value when setting performance objectives and benchmarks. If implemented on a regular basis, NHA can track health expenditure trends, which is useful for health care monitoring and evaluation purposes. NHA methodology can also be used to make

financial projections of a country's health system requirements.

NHA data combined with non-financial data such as disease prevalence rates and provider utilization rates, equips policymakers to make sound policy decisions and avoid potentially adverse policy choices.

Policy Uses of NHA

Despite NHA's recent introduction, its findings have already begun to affect health sector policies worldwide.

In post-apartheid South Africa, the government used NHA results to address one of its major policy objectives: more equitable distribution of health resources. Findings showed that average public health expenditure per person was 3.6 times higher in the country's richest districts than in the poorest ones. Poorer districts – which tend to be areas with the greatest health problems – had the worst geographical access to health workers, hospitals, and clinics (see Table 1). In response, the government enacted a moratorium on construction of private hospitals, which were usually built in the richest neighborhoods that already had the greatest access to health care. The moratorium was lifted only after policymakers developed regulations requiring an assessment of need when hospital construction is proposed, in an effort to reallocate health care resources. The moratorium illustrated the government's desire to take a more active role in coordinating and regulating the use of both public and private resources in order to achieve a more equitable distribution of health resources.

Table 1: Distribution of Resources in South Africa 1992/93

Income Quintiles of Magisterial Districts	General Doctors (per 100,000 pop.)	Registered Nurses (per 100,000 pop.)
I (lowest)	5.1	78.7
II	9.4	90.9
III	15.8	128.4
IV	13.5	128.2
V (highest)	23.3	189.9
National Avg.	14.1	129.5

Source: McIntyre, D. et al. 1995. *Health Expenditure and Finance in South Africa*. Health Systems Trust and the World Bank, South Africa.

Province (ranked according to personal disposable income, lowest to highest)	Total Health Expenditures per Capita (Rand)
Northern Province	164.07
Eastern Cape	226.98
North-West Territory	178.91
KwaZulu-Natal	236.88
Mpumalanga	136.60
Free State	266.49
Northern Cape	221.15
Western Cape	491.13
Gauteng	381.66
National Avg.	262.61

Source: Bureau of Market Research. 2002. *The South African provinces: population and economic welfare levels, 2000*. UNISA. <http://www.unisa.ac.za/dept/bmr/>

In the Philippines, NHA was used to evaluate the impact of health sector decentralization, begun in 1993. Prior to reforms, central and regional government funding for “public” health care (services such as immunizations, which benefit the community at large as well as the individual) was low, with central government funding actually decreasing. NHA studies conducted 1991–1997, before and after decentralization, showed that, after the reforms, government spending on public health care actually increased, from 25 percent to 35 percent of government health funding. This was largely due to increased funding from local governments, which in 1997 allocated more than half their health resources to public health care.

Thus, NHA revealed that decentralization had not adversely affected public health expenditures by local governments. Indeed, expenditures actually increased at the local level. NHA, and in particular its implementation on an annual basis, provided significant insight into the impact of decentralization on health care.¹

In Lebanon, NHA results for 1998 highlighted excessive expenditures on health care – almost 12.5 percent of the Gross Domestic Product (GDP), far more than in other upper middle-income countries with similar socio-economic characteristics. A probe into the reasons for the high expenditures identified the “fee for service” policy, whereby the government, in the absence of any public health providers, allowed individuals to seek care in the private sector and be reimbursed by the government for each service. This policy contributed to high utilization rates and therefore high costs.

As a result of this finding, the Lebanese government is now taking steps to implement provider payment reforms. It will introduce a system of capitated payments and a schedule of fees. It also will identify medical procedures that can be conducted on an outpatient or day basis, rather than on the current, and more costly inpatient basis.

NHA Methodology

NHA methodology adopts its basic principles of health accounting from the System of Health Accounts (SHA) of the Organization for Economic Cooperation and Development (OECD).² The SHA manual

¹ Schwartz, J.B., R. Racelis, and D.K. Guilkey. November 2000. *Decentralization and local government health expenditures in the Philippines*. Working Paper 0136. MEASURE Evaluation Project. <http://www.cpu.unc.edu/measure/publications/workingpapers/wp0136ab.html>

² OECD. 2000. *A System of Health Accounts (Version 1.0)*. Paris, France.

provides the International Classification for Health Accounts (ICHA) scheme, which categorizes each type of health expenditure. However, SHA classifications are most useful in countries where a single source of health spending dominates, as in most OECD member states.

NHA uses ICHA, but disaggregates, or breaks down, the categories/classifications further, based on the needs of an individual country. This flexibility allows NHA to accommodate expenditures in the more pluralistic health systems often found in middle- and low-income countries, where providers may receive payment from multiple sources and where payments may be made to numerous providers.

In other words, NHA is an offshoot of SHA that accommodates expenditures in more pluralistic health systems – an “SHA for developing countries.”

Defining Health Expenditures

As stated above, NHA measures health “expenditures.” Looking at expenditures allows for a more accurate assessment of how funds are actually used than does looking at budgeted amounts, because, although funds are budgeted for a given function, they may not in the end be spent that way.

Because expenditures are so essential to NHA, it is important for the NHA team to clearly understand the definition and boundaries of health expenditures. Countries are encouraged to use consistent definitions, which allows for greater cross-country comparability of health expenditure estimates.

What is Health Expenditure?

Health expenditure, as used by NHA, is defined as all expenditures for activities whose primary purpose is health improvement for the nation during a defined period of time. This definition applies regardless of the type of the institution/entity providing or paying for the health activity. For example, prior to the use of NHA, spending by the Ministry of Education (MoE) on medical training and teaching hospitals was excluded from health expenditure estimates. Similarly, under the NHA definition, not all activities conducted by the Ministry of Health fit within the health expenditure definition. For example, an MoH might fund the operation of orphanages, which would be deemed a non-health expenditure. Thus, NHA teams need to determine whether or not the primary purpose of an activity is for health. Based on this distinction, expenditures will be included or excluded from the NHA matrices.

Defining the National Boundary

In measuring national health expenditures, NHA does not use the geographical borders of a country but rather looks at the health transactions of that country’s citizens and residents. Therefore, it includes expenditure on health care by citizens and residents who are temporarily abroad and excludes spending on health care by foreign nationals within the country. Spending by international organizations on health and health-related goods and services for the residents of the recipient country are also considered national health expenditure.



Defining the Time Boundary

NHA uses the “accrual” method to define its time boundary; that is, expenditures are recorded for the time period in which the activity takes place and not when the actual payment is made. For example, if a hospital stay occurs during the final month of fiscal year 2002 but payment is made in fiscal year 2003, the expenditure is recorded for fiscal year 2002.

Criteria for Measuring Health Expenditures

The following criteria should be considered when countries are deciding how to collect, select, and measure health expenditures:

- ▲ *Transparency.* There should be clear documentation of the sources of the expenditure data, the classifications and definitions used, and any adjustments or calculations. Typically, this requires preparation of a written manual for NHA estimates in each country.
- ▲ *Policy relevance.* Health expenditure measures should be constructed to ensure inclusion of everything that is relevant to a country’s health policy development efforts.
- ▲ *Compatibility with existing international standards and practices.* Health expenditure measures should be compatible with international standard classifications and definitions, such as those of the System of National Accounts and government finance statistics. Where there are departures from these standards, they should be clearly documented.

- ▲ *Measurement feasibility.* It should be feasible to compile and validate health expenditure measures within a reasonable time (less than a year) and cost.

The NHA Framework and Classification System

The NHA Matrices

At its broadest level, NHA measures health spending as a percentage of the GDP. The NHA framework organizes and tabulates health spending data in the form of four “matrices.” Each matrix is a two-dimensional table showing the flow of funds from one category of health care entity to another, that is, how much is spent by each health care actor and to where those funds are transferred. Each health care actor in the matrices is categorized according to the ICHA proposed in the OECD SHA methodology.

NHA identifies four principal categories of health care entity within a health sector:

1. **Sources** are entities that provide health funds. They answer the question “where does the money come from?” Examples include Ministry of Finance, households, and donors.
2. **Financing Agents** (formerly known as financing intermediaries) receive funds from sources and use them to pay for health services, products, (e.g. pharmaceuticals), and activities. This is an important category because the programmatic responsibilities of financing



agents give them influence or actual control over how the funds are used. This category sheds light on the question “who manages and organizes the funds?” For example, though the Ministry of Finance (source) may allocate funds to the Ministry of Health, it is the MoH that decides how the funds will actually be distributed within the health sector. Therefore, the MoH is the financing agent. Other examples are insurance companies and other ministries (e.g. Ministry of Education).

3. **Providers** are the end users or final recipients of health care funds. This group of health care actors answers the question “to whom did the money go?” Providers are entities that deliver health services. Examples include private and public hospitals, clinics, and health care stations.
4. **Functions** refer to the services or activities that providers deliver with their funds. Information at this level answers the question “what type of service, product, or activity was actually produced?” Examples include curative care, long-term nursing care, medical goods (e.g. pharmaceuticals), preventive services, and health care administration.

There is a basic set of matrices (nine) that illustrates the financial flows of funds between the above-mentioned categories of health care actors. It is recommended that countries work through at least the following four matrices:

- ▲ Matrix 1: shows the transfer of health funds from *Sources* to *Financing Agents*
- ▲ Matrix 2: shows the transfer of health funds from *Financing Agents* to *Providers*
- ▲ Matrix 3: shows the transfer of health funds from *Financing Agents* to *Functions*
- ▲ Matrix 4: shows the transfer of funds from *Providers* to *Functions*

Reading NHA Matrices

Within an NHA matrix, the funds flow downward from the “originators” listed for each matrix column to the “recipients/users” listed for each row. In Matrix 1 (Figure 1), one can see that the Ministry of Finance transfers \$A to the Ministry of Health and \$C to the Ministry of Education. The total amount spent by each “originator” is shown at the bottom of each column. The total amount received by each “recipient/user” is included at the end of each row.

NHA matrices are also linked to each other as they trace the flow of funds from sources to intermediaries to providers to functions. As shown in Matrices 1 and 2 (Figure 1), the row headings (recipients/users) of one matrix become the column headings (originators) of the next matrix. Thus, the row totals of the first matrix become the column totals of the second matrix. For example, in Matrix 1, Sources to Financing Agents, the Ministry of Finance distributes its health funds to the Ministry of Health and the Ministry of Education. Matrix 2, Financing Agents to Providers, reveals the flow of funds from the Ministry of Health and Ministry of Education to specific providers.

Figure 1: NHA Matrices

Matrix 1 – Sources to Financing Agents

	Primary Sources				
Financing Agents	S.1. Min. of Finance	S.3. Donors	S.2.1 Employers	S.2.2 Households	
HF.1.1.1.1 Ministry of Health	A	B			A+B
HF.1.1.1.2 Ministry of Education	C				C
HF.2.2 Insurers		D	E		D+E
HF.2.3 Households (out-of-pocket)				F*	F*
TOTALS	A+C	B+D	E	F	G

* direct transfer of payment

Matrix 2 – Financing Agents to Providers

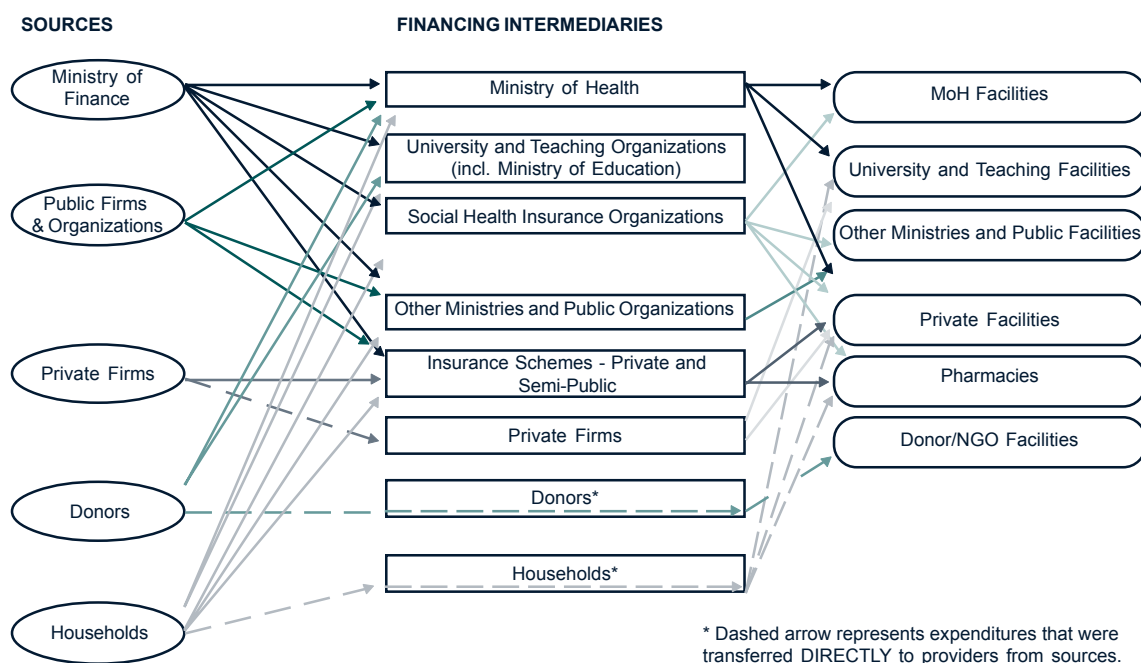
	Financing Agents				
Providers	HF.1.1.1.1 MoH	HF.1.1.1.2 MoE	HF.2.2 Insurers	HF.2.3 Households	
HP.1.1.1 Public Hospitals	W		X		W+X
HP.1.1.2 Private Hospitals		C			C
HP.3.4.6 Public Clinics			Y		Y
TOTALS	W=A+B	C	X+Y= D+E	F	G

Individual health expenditures must be carefully tracked through all the matrices, so that total national health expenditure – the number contained in the cell at the bottom right corner of each matrix – is the same in every matrix.

The purpose of showing health fund distributions within matrices and between matrices is to understand the flow of funds through the entire health sector. As Figure 2

illustrates, these flows can be quite complex. As discussed above, in the pluralistic health sectors of many middle- and low-income health countries, funds are not simply channeled from one source to one type of provider, such as from government to government providers. Rather, NHA has found that these health sectors are much more complicated and entail numerous types of actors and health fund transfers. Using matrices to plot the flows simplifies and clarifies the picture.

Figure 2: Flow of Funds through Health Sector



Classifying Health Expenditures

The International Classification for Health Accounts

Following the International Classification for Health Accounts developed by the OECD gives different countries a common language for describing who finances health and what is purchased. This consistency is essential for countries to conduct international comparisons of their health systems' performance.

The ICHA system groups health actors into categories with common characteristics. The principal ICHA categories are:

- ▲ Sources of health expenditures, denoted by the code *S*³

- ▲ Financing agents, denoted by the code *HF*
- ▲ Health providers, denoted by the code *HP*
- ▲ Health care functions, denoted by the code *HC*

These principal categories are then subdivided and coded numerically. They may also be further disaggregated into ICHA subcategories/subclassifications; for example, *sources* may be disaggregated into “public funds,” “private funds,” and “rest of the world funds.”

In this way, a health care actor is listed in an NHA matrix in the following way:

- ▲ First is the letter code for the principal ICHA category, e.g. “S” for sources

³ This category was not initially included in the ICHA scheme, but was developed for use in NHA exercises.



- ▲ Followed by a numerical code, e.g. “S.1”
- ▲ And finally, the ICHA name for this subcategory, e.g. “S.1 Public Funds”

NHA Subclassifications: Flexibility to Meet Country Needs

To the extent possible, the NHA matrices should follow the ICHA structure. Within the ICHA structure, however, NHA allows countries to adapt the scheme by creating subcategories for characteristics specific to their health systems. These subclassifications allow countries to include in their NHA system characteristics that they deem important while at the same time maintaining a standardized and internationally accepted framework.

For example, ICHA has the category HP.1.1 General Hospitals, but it is not subdivided into “government” and “private” general hospitals. If a country finds it necessary to compare spending between government and private general hospitals (e.g. to assess investment in the private delivery sector), it could add the subclassifications HP.1.1.1 *Government General Hospitals* and HP.1.1.2 *Non-government General Hospitals*.

Table 2 presents another example, a final NHA classification for sources. The bolded subcategories are those developed for the country’s priorities; the unbolded lines are classifications found in the ICHA.

Table 2: Classification of NHA Sources

Code	Description
S.1	Public Funds
S.1.1	- Central government revenue
S.1.2	- Regional and municipal government revenue
S.2	Private Funds
S.2.1	- Employer funds
S.2.1.1	- Parastatal employer funds
S.2.1.2	- Other employer funds
S.2.2	- Household funds
S.2.3	- Non-profit institutions serving individual grants
S.2.4	- Other private funds
S.3	Rest of the World Funds

In order to work well, the sub-classifications must meet the following criteria:

- ▲ *Policy relevance.* Establishing new subclassifications is extra work and detail so subclassifications should reflect important applications to policy.
- ▲ *Standards.* Subclassifications should, as much as possible, be developed according to international standards and conventions, i.e. ICHA.
- ▲ *Flexibility.* A country’s specific needs and interests should be incorporated into a framework that allows for generalizations.



▲ *Mutual exclusivity.* Subclassifications should be mutually exclusive and exhaustive so that each transaction can be placed in one – and only one – category.

▲ *Feasibility.* It must be possible to collect the expenditure data intended for the subclassification.

These criteria may conflict with one another. It is the responsibility of the NHA team to resolve the conflict in a manner that best preserves the policy relevance of NHA.

An exhaustive classification scheme will include a category for every type of expenditure, although in practice there may be instances in which the NHA team cannot assign certain expenditures to a specific category. The ICHA scheme allows for this by including an additional category, “not specified by kind” or n.s.k. However, use of this category must be kept to a minimum, as overuse will compromise the validity of the estimates. As NHA is repeated over time, data quality can be improved and the n.s.k. category can be phased out of the classification process.

Getting Fancy: Additional Matrices

In addition to the four principal health care actors discussed above (i.e. sources, financing agents, providers, and functions), NHA suggests additional categories, such as:

▲ **Beneficiary Groups** refers to the groupings of people who receive health care goods and services. These groupings can be according to socio-economic status (SES), location of residence (R) (e.g. urban/rural), age (A), and gender (G). Classification by such

beneficiary groups allows for a significant analysis of resource allocation, equity, and distributional issues in health spending.

▲ **Health Problems, Diseases, Interventions (D)** refers to the classification of health expenditures according to specific measures of health and disease, or policy issues, such as interventions addressing HIV/AIDS, malaria, or reproductive health.

▲ **Inputs (I)** includes specific types of inputs used to provide services, such as labor, drugs and pharmaceuticals, and medical equipment.

These additional classifications can be used to organize health expenditure information in a way that responds to important health policy priorities. For example, policymakers might want to allocate resources more equitably among geographical areas; in such a case, the beneficiary group breakdown by urban and rural areas might be useful. This expenditure information, when combined with other data such as health outcome information, can better indicate whether current expenditures and services translate into adequate health gains.

Five additional matrices are proposed using these new categories:

▲ **Matrix 5: The Distribution of Total Current Expenditure on Health (TCEH-H0) across Population Age and Gender Groups (FA x A/G)**

▲ **Matrix 6: The Distribution of Health Expenditures across Geographic Regions (FA x R)**

- ▲ Matrix 7: The Distribution of Current Expenditure on Health by Financing Agents to the Population Classified by Socio-Economic Status (FA x SES)
- ▲ Matrix 8: Allocating Different Types of Inputs by Financial Agents (FA x I): classification of inputs are for those goods that are used to produce health care and health related services.
- ▲ Matrix 9: The Distribution of Current Expenditure on Health by Financing Agents to the Population Classified by Health Problem / Disease (FA x D)

Preparing any of these matrices requires additional data or calculations to disaggregate health expenditures into these new categories.

Production of NHA: Getting the Process Started

Producing NHA consists of the following steps: collecting health expenditure data, organizing the data into the NHA matrices, analyzing the results for health policy, and disseminating the information to a wide range of stakeholders.

The NHA Team and Steering Committee

A successful approach to producing valid and reliable NHA results that have credibility with decision makers is to form a multidisciplinary NHA team, which will do most of the detailed technical work, and a more policy-oriented steering committee.

The NHA team should comprise members who work for various government agencies, both to ensure broad organizational representation and to make accessible diverse data sources that otherwise may not be known to other team members. The team should include members who are familiar with national economic statistics and accounting practices, knowledgeable about health systems and policies, and experienced with data analysis. They should have report writing and data collection experience as well. It is also very useful to have a health economist on the team. Such a team can facilitate careful interpretation of NHA results. Initially, the NHA team members will likely be appointed by their respective organizations. With the help of the steering committee, a permanent organizational home or structure should be found for NHA technical staff. However, all the original NHA team members can continue to be valuable contributors to each step of producing NHA.

Another body that has contributed to the success of NHA in many countries is the steering committee. It should include senior policymakers from the Ministry of Health, Ministry of Finance, and Ministry of Planning, and other high-level stakeholders from entities such as the national statistical office, academic groups, provider and consumer organizations, and the social health insurance organization. The committee's tasks include:

- ▲ Communicating policy concerns to the NHA team
- ▲ Giving feedback to the NHA team on results and findings
- ▲ Facilitating difficulties the team encounters while collecting data from different entities

- ▲ Assisting in interpreting the NHA results and drawing policy implications
- ▲ Assisting the Ministry of Health in translating the policy implications into policy action
- ▲ Supporting the NHA team in institutionalizing NHA as a routine annual exercise (see below)

The steering committee plays a key role in ensuring the institutionalization of NHA by establishing ownership at the nation's highest levels of policymaking.

Data Collection

Production of NHA requires extensive data collection from various ministries, donors, households, providers, and industry groups (e.g. private insurers, employers, and pharmaceutical companies). Often the data collection requires additional effort, to separate health expenditures from other types of expenditures or to estimate missing data.

A standard spreadsheet program such as Excel, Lotus, or Quattro is needed to fill and maintain the matrices, enter supporting data, and facilitate calculations. Because some data sets can be quite large (e.g. those from a household survey), it may be practical to enlist the central board of statistics or a similar body to manage the information.

Committed staff and accurate, complete data are key to producing a good NHA. The steering committee's role in providing access to all potential data sources is paramount. Equally important is that the NHA team have the

freedom to substitute official statistics with more accurate estimates.

To begin the process of data collection, the team should develop a data plan. The data plan sets out the course of action associated with data collection – who will collect the data, how, when, and from where – to help ensure that tasks are identified and completed on time.

The gamut of good sources of data varies from country to country. Nevertheless, the following sources are available in most countries.

- ▲ *Records from national, regional, and local level health authorities.* These records tend to be the most comprehensive, reliable, and accurate. However, they may not be up-to-date, because government accounts go through a lengthy auditing process. Auditing may create another problem, as it tends to generate two or sometimes three versions of total spending – un-audited and audited. These figures may or may not be identical, making it necessary to clarify which are correct.
- ▲ *Insurer records (social and private).* Insurer records should include premiums paid by households and companies to the insurer, and the insurer's medical and administrative costs. Private insurance companies may be reluctant to share some of their information, particularly their loss ratios and profits. Also, insurance records may exclude an important component of data, such as payments made by households directly to the provider (co-payments and deductibles).



▲ *Provider records.* These can be collected from the providers themselves or the regulatory and financial agencies, such as tax authorities or licensing agencies. Often an industry association also collects routine data for its own purposes. As with private insurance companies, private providers are often reluctant to reveal their financial information for tax and other reasons, and a legal decree may be needed to mandate them to do so. Another potential issue is that, in some countries, it may be difficult to have a precise count of providers to get an accurate sample size for a survey. In addition, the presence of a large non-formal sector (traditional healers) may make it nearly impossible to capture reliable and accurate expenditure data.

▲ *Household survey.* Household surveys are undoubtedly the most important source of information on private (household) out-of-pocket expenditures. Household data are also key for equity analysis, as they are linked to socio-economic and demographic characteristics. Household surveys specifically addressing health issues are conducted infrequently because they are expensive. It is possible to use household survey data from one year to estimate other years, but this extrapolation can be problematic. Broader household surveys are held more routinely, but do not necessarily include all the questions necessary to capture health care expenditures.

▲ *Donor assistance.* Often, annual surveys and routine reports of all donor assistance

in a country (produced by UNDP, WHO, or Ministry of Health) provide much of the necessary data. Nevertheless, issues arise with donor health expenditures: one is difficulty in determining the monetary value of in-kind donations (drugs, clinical supplies, vaccines). Another is the difference in the disbursement amounts reported by the donor and the expenditure amounts reported by the MOH. Also, when donors donate directly to an NGO or local entity without going through the ministry, the financing data is likely to be missed.

Following are ways to avoid or surmount the common data collection problems discussed above.

- ▲ Identify sources of independent data that can be used for validation/verification.
- ▲ Try to obtain the same estimate from at least two sources.
- ▲ When estimates differ, determine what a “large” difference is and don’t waste time trying to reconcile small differences. Use the data from the more reliable source and document the discrepancy.
- ▲ When discrepancies in estimates appear to be large, examine the estimates more carefully: Was the same item measured? Were the “boundaries” the same? Was the time period the same? Was one accounted for on a cash basis, the other on an accrual basis?



Interpreting Data for Policy Purposes

The estimation of expenditures and financing flows by NHA provides a solid indicator of the “financial health” of a health sector, and this can be used as a strategic planning tool. The value of NHA is not the findings themselves but the “so what” questions that the findings can answer. For example, Jordan spends 9.2 percent of its GDP on health care.⁵ This information in itself is not as meaningful as the answer to “so what if Jordan spends so much on health care?” On comparing this level of expenditure with health outcomes in Jordan, or with other countries in its socio-economic category, the answer to the “so what” question becomes apparent – this level of expenditure may be unsustainable for a country that is experiencing slow economic growth. The policy implication then, is cost containment in the health sector. In other words, NHA results must be analyzed in terms of the broad policy context.

The full value of NHA is in a three-step process – obtaining NHA results, interpreting the results, and implementing appropriate policy. The NHA team, the steering committee, and the legislative body of the country fulfill these tasks respectively. The focus of the NHA technical team should be to collect and analyze data; members are not necessarily in a position to interpret the policy implications of their findings. The steering committee, consisting of policymakers and others with a more “big picture” perspective, answers the “so what” and serves as the liaison between the technocratic NHA team and the legislature. The committee interprets

the results in terms of policy implications. Given this crucial role, it is imperative that committee membership is chosen wisely. Finally, it is up to the legislative body to enact and implement a policy based on those results.

Institutionalizing NHA

While many middle- and lower-income countries have started using NHA for estimating health expenditures, relatively few countries have taken steps towards conducting NHA on a regular and sustained basis – a process called institutionalization.

Institutionalization is an ongoing process in which NHA activities, structures, and values become an integral and sustainable part of government operations. With institutionalization, a department or other unit is designated to oversee the collection, analysis, and reporting of health expenditure data in a routine and systematic fashion, with the full support of the government. This complex process can take years and multiple estimates before it is fully integrated into the country’s formal structure, but in order to ensure that NHA remains an effective policy tool in the future, institutionalization should be a goal from the initiation of NHA.

Four steps are essential to the process of institutionalizing NHA:

- ▲ Create demand on the part of policymakers for institutionalization;
- ▲ Determine a location where NHA is housed;
- ▲ Establish standards for data collection and analysis; and
- ▲ Institute data reporting requirements.

⁵ Shehata, Ibrahim, Hani Brosk, A.K. Nandakumar, Dwayne Banks, et al. March 2000. *Jordan National Health Accounts*. Bethesda, MD: Partnerships for Health Reform, Abt Associates, Inc.

Creating Demand

For policymakers to be willing to invest time and resources in NHA, the benefit of the investment must be visible. Producing NHA estimates is only part of the process; the activity alone does not guarantee that results will be used for “evidence-based” decisionmaking. NHA must be channeled to the appropriate audience, reaching those who are in positions of power and are able to influence decisions. NHA reports should be disseminated in easily understandable formats, such as oral presentations and written briefs, that stress policy relevant aspects of the findings. Dissemination ideally happens soon after findings are reached, but it should also be timely, because timing is important to creating demand for the information. For example, dissemination should be coordinated with the legislative schedule. Initial dissemination should be followed by periodic updates and summaries. By establishing a mutually beneficial relationship between NHA estimates and policymakers who will use them, the NHA team can lay the foundation for institutionalization.

Housing NHA

NHA data should be housed in a location that will promote use of the data by policymakers. Traditional locations include: the Ministry of Health, the Ministry of Finance, the central statistical bureau, a local university, or the central bank. Often, the decision upon where to house NHA hinges on how NHA findings will be disseminated and used. The location should also serve to encourage interinstitutional coordination. It is also useful to house NHA in a location with visibility, to garner political support and boost awareness of NHA’s importance. NHA also needs its own line item in the national budget, a recognition of NHA’s independent and systemized status.

Standardizing Data Collection and Record-keeping

Institutionalization also means that data and reporting mechanisms are standardized into a consistent format; this allows for year-to-year comparisons. Procedures and protocols should be systemized with the creation or strengthening of the country’s health information system. In addition, the NHA team is encouraged to keep track of the original methodology and of any problems that arise during earlier rounds of NHA. Maintaining records offers useful insights for streamlining the NHA exercise and increasing the utility of results. In addition, keeping records guards against “memory loss,” in the event that the NHA team loses key members. Safeguarding the NHA process and standardizing data are critical components of the institutionalization process.

Reporting Requirements

Institutionalization of NHA requires continual replenishment of data. This in turn requires official support for data sharing – sometimes a greater problem than overall lack of data – from NHA-relevant groups in the private as well as the public sector.

By requiring the various NHA-relevant groups to report data to the NHA team, or at least to a central location, the reporting process is strengthened, and becomes more integrated into the NHA structure. Reporting requirements are likely the single most important component of successfully institutionalizing NHA.



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The PHRplus Primer series is a reference to orient policymakers and other stakeholders to the terminology, concepts, and results of health reform so to participate effectively in policy dialogue and decision-making.

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